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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,942	03/05/2002	Johann Hipp	089474-000000US	7399

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EXAMINER	
NGUYEN, SANG H	
ART UNIT	PAPER NUMBER
2877	

DATE MAILED: 07/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/092,942	HIPP, JOHANN	
	Examiner	Art Unit	
	Sang H Nguyen	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 May 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7 and 9-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7 and 9-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *3 & 5* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on 05/20/03 is received and made of record as paper No.9. It is noted that the present application contains claims 1-7 and 9-11 and claim 8 is has been canceled by the Amendment filed on 05/20/03.

Information Disclosure Statement

2. This office acknowledges of the following items from the Applicant: Information Disclosure Statement (IDS) file on 06/06/02 is received and made of record as Paper # 3. The references cited on the PTOL 1449 form have been considered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims ~~ are rejected under 35 U.S.C. 103(a) as being unpatentable over Endo (U.S. Patent No. 4,634,272) in view of Bodlaj (U.S. Patent No. 4,212,534).

Regarding claims 1 and 9-11; Endo discloses an apparatus for determining a distance profile, comprising:

* a light transmitter (21 of figure 1) for transmitting pulse light signals (Lt of figure 1) in the direction of a monitored space (figure 1);

* a light receiver (22 of figure 1) for receiving light reflected/remitted signals (Lr of figure 1) from the monitored space (figure 1); and

* an evaluation unit (23 of figure 1) for determining distance values in dependence on the light transit time (figure 4) between the transmission and reception of the light signals (Lt,Lr of figure 1 and claims 12);

* wherein the light transmitter (21 of figure 1) simultaneously transmitting of a plurality of light signals (Lt of figure 3) in the direction of a plurality of reflection remission points (42,43,44 of figure 2) disposed in the monitored space and spaced apart from one another (figure 3); and

* wherein the light receiver (22 of figure 1) includes a plurality of photodiodes (26a,26b,26c of figure 1 and col.3 lines 19-34) for receiving of light reflected/remitted signals (Lra,Lrb,Lrc of figure 3) by the reflection/remission points (42,43,44 of figure 3). See figures 1-6.

Endo teaches all of features in claimed invention except for a light deflection device associated with the light transmitter for deflecting the pulse light signal. However, Bodlaj teaches that it is known in the art to provide a light deflection device (10 of figure 1) associated with the light transmitter is considered to be a laser (12 of figure 1) for deflecting the pulse light signal (41,42,43 of figure 1).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made modify an apparatus for determining a distance profile of Endo with a light deflection device associated with the light transmitter for deflecting the pulse light signal as shown in the device of Bodlaj for the purpose of measuring of the distance of a surface of an object.

Regarding claim 2; Endo discloses the evaluation unit (23 of figure 1) for calculating distance values (Ra,Rb,Rc of figure 3) based on the light transit time (figure 4) between the transmission of the plurality of light signal (Lt of figure 3) and the reception of the light signals (Lra,Lrb,Lrc of figure 3) by three or more photo-sensitive elements (26a,26b,26c of figure 1) with each distance value (Ra of figure 3) being associated with a photo-sensitive element (26a of figure 1).

Regarding claim 3; Endo discloses the plurality of transmitted light signals (Lt of figures 1 and 3) are component of a fan shape light bundle (figures 1 and 3).

5. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endo and Bodlaj as applied to claims 1-3 above, and further in view of Araki et al (U.S. Patent No. 4,656,462)..

Regarding claim 4; Endo is shown to teach all of features in claimed invention except for the fan shape light bundle extends in one plane. However, Araki et al teaches that it is known in the art to provide the plurality of transmitted light signals (LBs of figure 1 and col.4 lines 8-20) are component of a fan shape light bundle (figures 1 and 3), wherein the fan shape light bundle (figures 1 and 3) extends in one plane (figure 1). It would have been obvious to one having

ordinary skill in the art at the time the invention was made to provide apparatus for determining a distance profile of Endo with the plurality of transmitted light signals are component of a fan shape light bundle, wherein the fan shape light bundle extends in one plane as shown in the device of Araki et al for the purpose of determining the distance on basis of the amount of the transmitted/reflected light and object.

Regarding claim 5; Endo is shown to teach all of features in claimed invention except for the light transmitter for projecting light signals on a line of light. However, Araki et al discloses that it is known in the art to provide the light transmitter (11 of figure 1) for projecting light signals on a line of light (GF of figure 1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide apparatus for determining a distance profile of Endo with the light transmitter for projecting light signals on a line of light as shown in the device of Araki et al for the purpose of determining the distance on basis of the amount of the transmitted/reflected light and object.

Regarding claims 6-7; Endo discloses the light transmitter (21 of figure 1) is a semiconductor laser (col.1 line 13-14) and the light receiver (22 of figure 1) is a photodiode row (figures 5-6).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Sang Nguyen whose telephone number (703)308-6426. The examiner can normally be reached on Monday through Friday from 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Frank Font, can be reached on (703)308-4881. The fax phone number for the organization where this application or proceeding is assigned is (703)308-7722 or 7724.

Snguyen/SN

January 21, 2003

Frank G. Font
Supervisory Patent Examiner
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